THE JOURNAL
OF
ANIMAL ECOLOGY

EDITED FOR THE
BRITISH ECOLOGICAL SOCIETY
by
CHARLES ELTON
and
A. D. MIDDLETON

VOLUME 5
1936

WITH TEN PLATES, AND NUMEROUS FIGURES
IN THE TEXT

CAMBRIDGE
AT THE UNIVERSITY PRESS
1936

PRINTED IN GREAT BRITAIN

CONTENTS

ORIGINAL PAPERS

PAGE

Ahmad, Taskhir. The influence of ecological factors on the Mediterranean flour moth, *Ephestia kühniella*, and its parasite, *Nemeritis canescens* . . 67

Baker, John R. Nomograms for saturation deficiency 94

Boycott, A. E. The habitats of fresh-water Mollusca in Britain . . . 116

Buxton, P. A. Breeding rates of domestic rats trapped in Lagos, Nigeria, and certain other countries 53

Carpenter, J. Richard. *Special review.* Quantitative community studies of land animals 231

Chvaliova, M. A. *See* **Sokolov, N. P.** 390

Cramp, S. and **Ward, J. H.** The rookeries of South Manchester and district 351

Davies, Gwion. Distribution of the badger (*Meles meles*) around Denbigh, with notes on its food and habits 97

Davis, D. H. S. A reconnaissance of the fauna of Akpatok Island, Ungava Bay 319

Fidler, J. Havelock. An investigation into the relation between Chafer larvae and the physical factors of their soil habitat 333

Fisher, James. *See* **Hartley, C. H.** 370

Fisher, James. *See* **Vevers, H. G.** 246

Fraser, James H. The distribution of rock pool Copepoda according to tidal level 23

Gause, G. F., Smaragdova, N. P. and **Witt, A. A.** Further studies of interaction between predators and prey 1

Harrison, H. The Shinyanga game experiment: a few of the early observations 271

Hartley, C. H. and **Fisher, James.** The marine foods of birds in an inland fjord region in West Spitsbergen. Part 2. Birds 370

Humphries, Carmel F. An investigation of the profundal and sublittoral fauna of Windermere 29

Maynard, Vera. The bird population of an area in Sussex 312

Middleton, A. D. The population of partridges (*Perdix perdix*) in Great Britain during 1935 252

Norris, Maud J. (**Mrs O. W. Richards**). Experiments on some factors affecting fertility in *Trogoderma versicolor* Creutz. (Coleoptera, Dermestidae) 19

Pickles, Walter. Populations and territories of the ants, *Formica fusca*, *Acanthomyops flavus* and *Myrmica ruginodis*, at Thornhill, Yorkshire. . 262

Slack, H. D. The food of caddis fly (Trichoptera) larvae 105

Smaragdova, N. P. *See* **Gause, G. F.** 1

Sokolov, N. P. and **Chvaliova, M. A.** Nutrition of *Gambusia affinis* on the rice fields of Turkestan 390

Stott, F. C. The marine foods of birds in an inland fjord region in West Spitsbergen. Part 1. Plankton 356

Vevers, H. G. and **Fisher, James.** A census of gannets on Ailsa Craig, with a new method of estimating breeding-cliff populations . . . 246

Ward, J. H. *See* **Cramp, S.** 351

Williams, C. B. A modified Greenwich night-cloud recorder used for ecological work 348

Winterbottom, J. M. Bird population studies: an analysis of the avifauna of the Jeanes School Station, Mazabuka, Northern Rhodesia . . . 294

Witt, A. A. *See* **Gause, G. F.** 1

NOTES PAGE

Carpenter, J. Richard. Pest outbreak enquiry 187

Duffield, J. E. Fluctuations in numbers of crayfish 396

Ford, John. A method of counting large samples of small Arthropods . . 396

NOTICES OF PUBLICATIONS ON ANIMAL ECOLOGY 199, 402

REVIEWS

Alexander, W. B., Southgate, B. A. and **Bassindale, R.** Survey of the River Tees. Part II; The Estuary—Chemical and biological. (J. R. Carpenter) 193

Bews, J. W. Human ecology. (Anon.) 196

Bioklimatische Beiblätter der meteorologischen Zeitschrift. (Charles Elton) 399

Bodenheimer, F. S. Animal life in Palestine: an introduction to the problems of animal ecology and zoogeography. (Anon.) 198

Clarke, Lilian J. Botany as an experimental science in laboratory and garden. (Anon.) 196

Ehrenbaum, Ernst. Naturgeschichte und wirtschaftliche Bedeutung der Seefische Nordeuropas. (E. S. Russell) 398

Elton, Charles. Animal ecology. (J. R. Carpenter) 400

Foerster, R. E. An investigation of the life history and propagation of the sockeye salmon (*Oncorhynchus nerka*) at Cultus Lake, British Columbia. No. 5. The life history cycle of the 1926 year class with artificial propagation involving the liberation of free-swimming fry. (F. T. K. Pentelow) . . 399

Hine, Reginald L. and **others.** The natural history of the Hitchin Region. (Anon.) 197

Journal of Ecology. Vol. 24, Nos. 1 and 2. (A. G. Tansley) . . 188, 398

MacGinitie, G. E. Ecological aspects of a California marine estuary. (J. R. Carpenter) 192

Makins, F. K. The identification of trees and shrubs. (Charles Elton) . 400

Menzies, W. J. M. Sea trout and trout. (D. H. Chitty) 400

Pearse, A. S. The migration of animals from sea to land. (Anon.) . . 197

Peters, Nicolaus and **Panning, Albert.** Die chinesische Wollhandkrabbe (*Eriocheir sinensis*) in Deutschland. (Charles Elton) 188

Shelford, V. E., Weese, A. O., Rice, Lucile A., Rasmussen, D. I., Maclean, Archie, Wismer, Nettie M. and **Swanson, John H.** Some marine biotic communities of the Pacific coast of North America. (J. R. Carpenter) 192

Stapledon, R. G. The land: now and tomorrow. (Anon.) 197

Taylor, Walter P. Ecology and life history of the porcupine (*Erethizon epixanthum*) as related to the forests of Arizona and the South-western United States. (Anon.) 197

Zoogeographica: International Review for Comparative and Causal Geography. (Charles Elton) 195

BRITISH ECOLOGICAL SOCIETY

Annual meeting: constitution and rules: list of members . . . 214